

THE GENUS *EUMAROZIA* HEINRICH (OLETHREUTIDAE)

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The genus *Eumarozia* was proposed by Heinrich (1926: 110) for the single species *Grapholitha (Poecilochroma) malachitana* Zeller, and until now, has remained monobasic.

The second species, described below, first came to our attention in 1970 and again in 1972, when it was submitted for determination. The third species which I now include in this genus was described by Meyrick. These species are of particular interest because they greatly extend the range of *Eumarozia*.

Eumarozia malachitana (Zeller)

Fig. 2

Grapholitha (Poecilochroma) malachitana Zeller, 1875, Verh. zool.—bot. Ges. Wien 25: 292.

Penthina malachitana (Zeller), Fernald, 1882, Trans. Amer. Ent. Soc. 10: 33 (no. 200); Fernald, 1891, in Smith, List Lepid. Bor. Amer., 91 (no. 4818).

Olethreutes malachitana (Zeller), Fernald, 1903, in Dyar, U.S. Nat. Mus. Bull. 52: 452 (no. 5044); Kearfott, 1903, in Smith, Check List Lepid. Bor. Amer., 101 (no. 5447); Walsingham, 1914, in Godman and Salvin, Biol. Centr. Amer. 42: (Lepid. Heter. 4): 252; Forbes, 1923, Mem. 68, Cornell Univ. Agr. Exp. Sta., 457; Bottimer, 1926, J. Agric. Res. 33(9): 817.

Argyroploce malachitana (Zeller), Barnes & McDunnough, 1917, Check List Lepid. North America, 168 (no. 6854).

Eumarozia malachitana (Zeller), Heinrich, 1926, U.S. Nat. Mus. Bull. 132: 111, figs. 60, 194, 413; McDunnough, 1939, Mem. So. Calif. Acad. Sci. 2(1): 40 (no. 6634); Jones, 1943, Lepid. Nantucket and Martha's Vinyard Islands, Mass., 149, 206; McKay, 1959, Can. Entomol. 91(Suppl. 10): 159, fig. 155; Kimball, 1965, Arthropods of Florida and Neighboring Land Areas. Lepid. Florida, 256 (no. 6634).

Type: British Museum (Natural History).

Type locality: Missouri.

Distribution: The species *malachitana* is widely distributed in the eastern and southern United States and its range extends into Mexico. According to specimens in the U.S. National collection and the collection of Dr. Annette F. Braun, Cincinnati, Ohio, the distribution is, alphabetically by states, as follows: ARKANSAS: Devil's Den State Park, Fayetteville (June); DISTRICT OF COLUMBIA: Washington (Sept.); FLORIDA: Lake Placid, St. Petersburg, Sarasota (Feb., Apr.); GEORGIA: Savannah (Aug.); ILLINOIS: Quincy (Sept.); INDIANA: Bedford (Sept.); KANSAS: Eureka, Pittsburg (June); MARYLAND: Hyattsville, Plummer's Island (Aug.); MISSOURI: Joplin, "Mtn. Grove," "C. Mo." (June); NORTH CAROLINA: Highlands, Knotts Is., Southern Pines (June, July); OHIO: Cincinnati (Sept.); OKLAHOMA: Oklahoma City (Sept.); TEXAS: Brownsville, Kerrville, Lk. Charlotte, San Benito (Apr.); VIRGINIA: Falls Church, Wicomico Ch. (Aug., Sept.). Heinrich (1926: p. 111) also recorded the species from ". . . Central America and South America." There are two specimens before me from Mexico from Salina Cruz, Oaxaca, and Orizaba (Wm. Schaus

coll.). I have seen none from South America. Presumably Heinrich accepted Zeller's original record "Sudamerica."

Foodplants: *Diospyros virginiana* L. (persimmon); *Ostrya virginiana* (Mill.) K. Koch (hop hornbeam); *Phloxeris* sp.; *Pyrus communis* L. (pear); *Cassia* sp. "black sapota" (*Achras*? sp.).

***Eumarozia beckeri* Clarke, new species**

Figs. 1, 3, 4

Alar expanse 13–15 mm. **Labial palpus** creamy white; third segment and outer side of second, light ochraceous buff. **Antenna** gray; cilia short, whitish. **Head** with face and vertex buff; posteriorly gray with white-tipped scales. **Thorax** grayish fuscous, tegula grayish fuscous, some scales white-tipped. **Forewing** ground color grayish fuscous; beyond basal fifth of ground color a shining buff transverse fascia extends from costa to dorsal margin, the dorsal third of fascia overlaid with leaden metallic scales; on costa, preceding the pale fascia, a triangular spot of grayish olive; the pale fascia is followed on its outer side by a transverse band of grayish olive, the latter edged outwardly with a narrow fascia of leaden-metallic scales; both grayish olive areas show a golden sheen in certain lights; outer half of wing deep hellebore red variously marked with fuscous; from end of cell at about vein 5, a crescentic fuscous mark ending on termen; on tornus a quadrate fuscous spot and a fuscous blotch between the latter and the crescentic mark; subterminally a curved line of small leaden-metallic spots; around termen a series of 5 or 6 fuscous dots; cilia fuscous with some red scales mixed. **Hindwing** grayish fuscous, slightly darker toward termen; extreme costal edge of male buff, followed inwardly with a longitudinal band of black scales; cilia grayish with a darker subbasal line. **Foreleg** gray strongly suffused fuscous on outer side; tarsal segments spotted with white; **mid- and hindlegs** leaden gray. **Abdomen** grayish fuscous to leaden gray with a few scattered buff scales ventrally and in tuft.

Male genitalia (USNM 24095): Harpe with deeply incised neck; cucullus rounded, broad; Spc¹ a single long seta; Spc² absent; base of cucullus with series of strong setae; ventral edge of sacculus with cluster of long setae and inner surface setaceous. Gnathos a moderately broad band. Uncus reduced, rounded. Socius a setaceous lobe at end of flattened stalk. Vinculum broadly rounded. Tegumen oval. Anellus subtriangular strongly attached posteriorly to a scoop-shaped member through which the aedeagus articulates. Aedeagus slender, curved; vesica armed with a cluster of long cornuti.

Female genitalia (USNM 24096, 24097): Ostium produced dorsally, nearly rectangular. Antrum not differentiated. Inception of ductus seminalis from anterior end of ductus bursae, slightly posterior to junction with bursa copulatrix. Ductus bursae sclerotized for most of its length, slender. Bursa copulatrix membranous. Signa two triangular plates with serrate edges.

Holotype: USNM No. 72436.

Type locality: Costa Rica, Turrialba.

Distribution: Costa Rica.

Foodplant: *Juglans olanchanum* Standl. & L. Wms.

Described from the holotype ♂, 55 ♂♂ and 55 ♀♀ paratypes from the type locality dated 29 August to 3 October 1972, V. O. Becker; and 2 ♂♂ paratypes Costa Rica, Turrialba (12 January 1970), no collector, cf. *Juglans*. Paratypes are distributed as follows: 5 ♂♂, 5 ♀♀ (25–30 September 1972) in Museu de Entomologia de la Universidad de Costa Rica; 48 ♂♂, 48 ♀♀ (9 September–3 October 1972) Becker Collection in the Department de Zoologia da Universidade Federal do Paraná, Brasil; 2 ♂♂, 2 ♀♀ (12 January 1970 and 29 August 1972), U.S. National Museum.

The two species treated here are closely allied but may be distinguished



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Fig. 1. *Eumarozia beckeri*, new species. Turrialba, Costa Rica. Fig. 2. *Eumarozia malachitana* (Zeller). Devil's Den State Park, Arkansas.

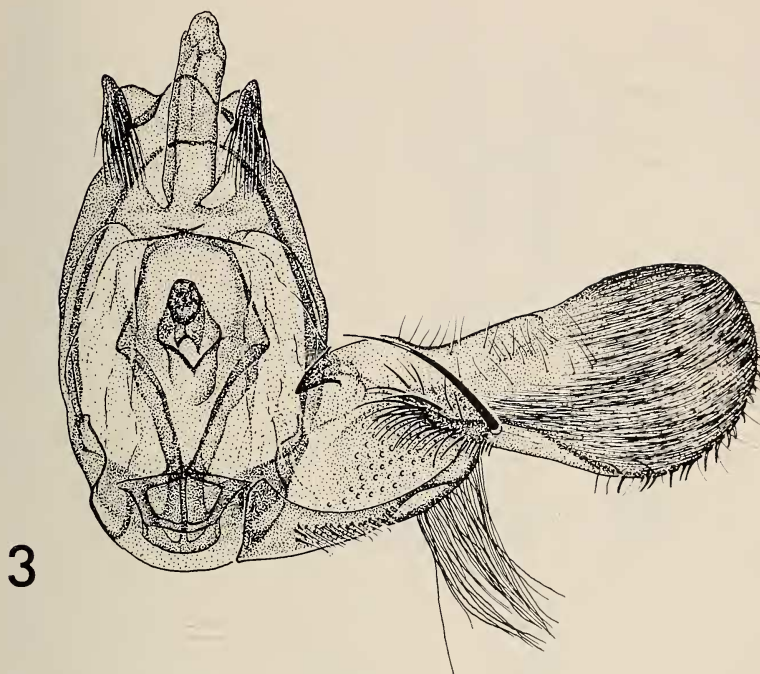


Fig. 3. *Eumarozia beckeri*, new species. Ventral view of male genitalia with left harpe omitted.

easily on pattern and genitalia. In *E. malachitana* the olive marking near center of forewing is nearly oval in shape, does not reach the dorsal edge and is bordered by a slender buff or white line. In the case of *beckeri*, however, the olive marking is in the form of a transverse fascia which reaches from costa to dorsum. The male genitalia are similar; $\text{Sp}c^1$ (Heinrich, 1926: fig. 60) being prominent in both species; but $\text{Sp}c^2$ is absent in *beckeri*. The only substantial difference between the female genitalia lies in the size and shape of the ostium which is much narrower and longer in *beckeri* than in *malachitana*.

It gives me great pleasure to name this species in honor of Victor Omar Becker who collected and reared the major part of the type series.

Eumarozia elaeantes (Meyrick), new combination

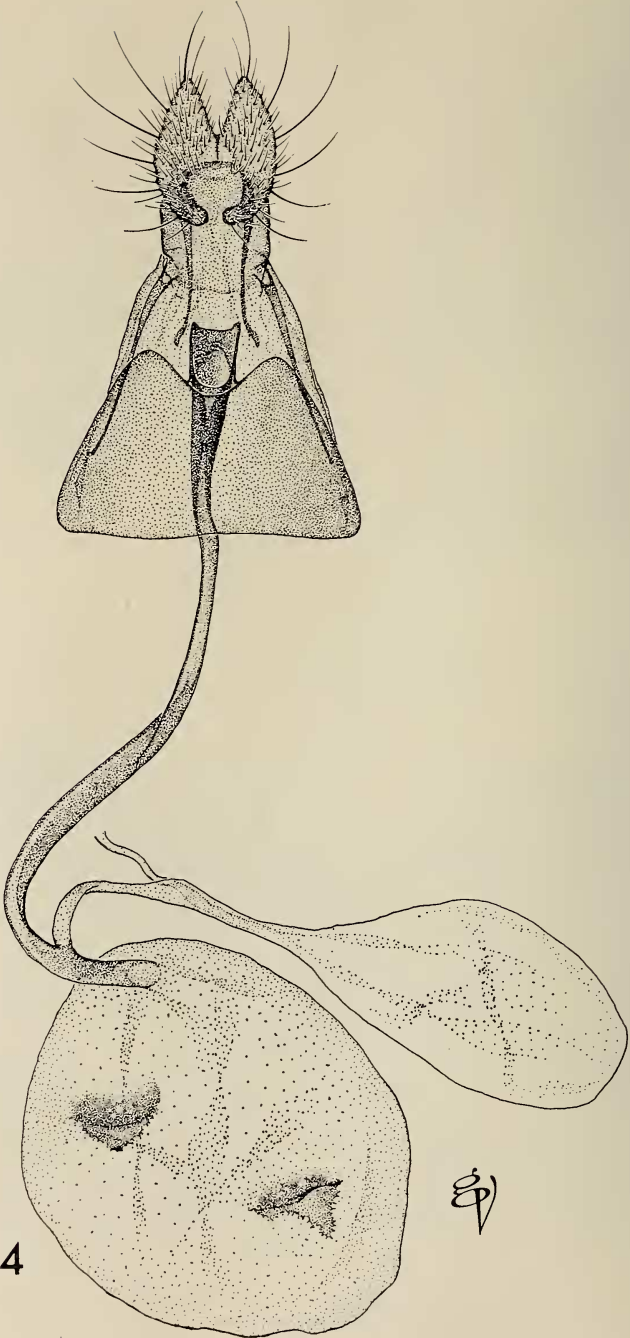
Argyroploce elaeantes Meyrick, 1927, Exotic Microlepid. 3: 340.

Olethreutes elaeantes (Meyrick), Clarke, 1958, Catalogue of the Type Specimens of Microlepidoptera in the British Museum (Natural History) described by Edward Meyrick, 3: 507, pl. 252, figs. 1-1a.

Type: British Museum (Natural History).

Type locality: Bolivia, Andes, 10,000 feet.

Distribution: Known only from the type locality.



Foodplant: Unknown.

Meyrick described *elaeanthes* from the unique type, and as far as I know, the type is the only known specimen. The genitalia of the male *elaeanthes*, which I figured (1958: pl. 252, figs. 1-1a), are typical for the genus except Spc^2 (Heinrich, 1926: fig. 60) is missing, as in *beckeri*. Inside costa, at basal third of harpe, is a cluster of strong setae, and from the ventral edge of sacculus is a series of long, hairlike setae in *elaeanthes* which are absent in *malachitana*. In the forewing of *elaeanthes* there is no white line delineating the olive green area as in *malachitana*. I have not figured *elaeanthes* here; the figure cited is adequate for recognition.



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Fig. 5. *Eumarozia* distribution.

ACKNOWLEDGMENTS

The photographs for this paper were made by Victor E. Krantz and the drawings were made by George Venable, both on the staff of the Smithsonian Institution.

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Fig. 4. *Eumarozia beckeri*, new species. Ventral view of female genitalia.

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THREE NATURAL HYBRIDS OF *VANESSA ATALANTA RUBRIA*
 × *CYNTHIA ANNABELLA* (NYMPHALIDAE)

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In an effort to better understand the relationship and variation of two local butterflies, *Vanessa atalanta rubria* (Fruhstorfer) and *Cynthia annabella* Field, not only as adults but also as larvae, I have been rearing to maturity all vanessid larvae encountered on their various foodplants. In the vicinity of northeastern Thousand Oaks, California, foodplants for *C. annabella* are *Althaea rosea* (L.) Cav. (Hollyhock), *Malva parviflora* L. (Cheeseweed), both Malvaceae; and *Urtica holosericea* Nutt. (Stinging Nettle), Urticaceae. *Urtica holosericea* grows abundantly along an intermittent creek, which flows through the Lang Ranch property, and is the only local foodplant for *V. a. rubria*. The surrounding floral communities are coastal sage scrub, chaparral, southern oak woodland (Munz, 1968), and annual pasture grassland. The area is but a half mile from city subdivisions.

On 3 April 1972 I collected two second instar larvae on two *Urtica* plants occupying a position further downstream than any other *Urtica*. Several leaves were taken as a food supply. In later instars both larvae appeared at a glance to be *C. annabella*, so when all the *Urtica* leaves were consumed the larvae were given leaves of *Althaea rosea*, which they readily devoured to maturity. At this time one larva hung and pupated, and later emerged as *C. annabella*. The other continued growth and surpassed in size all other *C. annabella* reared to date. Finally it pupated, and when the hardened pupa was observed, characteristics of